SCOPE OF WORK REAL ESTATE VALUATION MANAGEMENT SYSTEM

FOR

East-O-Limited

Reem Island,
P.O. Box 113939, Abu Dhabi
United Arab Emirates

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1. INTRODUCTION

Real estate evaluation & valuation management system

Eltizam Asset Management Group is firmly established as one of the leading asset management companies in the MENA region, managing over 80 high rise towers, 3 master communities and over AED 60bn of asset value.

East-O Limited (the Company) is Eltizam' s technology development and IP ownership entity, which looks after the technology needs of group companies, and works on the commercialization of technology solutions.

Our understanding of our clients' unique objectives distinguishes us in the market. We aim to leverage our expertise through our subsidiary groups, Three60 Communities and Tafawuq Facility Management, which over the full spectrum of integrated asset management solutions.

As the Company enters a new cycle of growth it recognizes the need to invest in an Information Technology Business Operational Software Solution which will provide a platform to plan, control and manage its diverse community activities, whilst providing a communication flow to the Company's management, stakeholders & Customers.

The implementation of the Information Technology Business Software Solution can be phased, with an anticipated 'Go Live' by 30th Nov 2022. The implementation will consist of integrating application compatible to merge with our application & reusable for data analysis purposes. Complete Reporting structure should be available. The actual method of integration will be contingent on the final design solution proposed by the Successful Vendor of the Information Technology Business Software Solution and as approved by the Company.

Key Solution Objective:

To develop a real estate management solution with 2 key functionalities: management of valuations requests, and management of real estate broker registrations. The solution will include request workflows, an embedded financial module for valuations, and related data analytics dashboards for performance tracking.

Schedule of Events

GENERAL DETAILS		
Department Name	Technology	
Scope of Work	Refer to Section 3 & 4	
Type of Contract	Software Development	
Currency	USD (\$\$)	

Eligibility Criteria	As per requirements specified in RFP
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Project Timelines

Sr. No	ACTIVITY	DEADLINE
1	Publishing of Request for proposal (RFP)	08 – July -2022
2	Clarifications & responses	18 – July -2022
3	RFP Submission by Vendors	25 – July -2022

Notes –The vendor is required to provide a detailed strategy as per the activities mentioned in RFP with indicative timelines for procurement, readiness and inspection should be maintained.

Intent

The intent of this Scope of Work document is to instruct offers from suitable software solution providers to plan, control and manage the Company's diverse operational business activities by developing a purpose-scoped product, which provides a communication flow to the Company's management, stakeholders & Customers.

The Project is to deliver a fully integrated operational software solution, which the Company can use to manage, collect, process, store, interpret and report data. The operational software solution will have the capacity for business growth and diversification, whilst retaining management control and segregation of duties.

The Vendor's proposal(s) submitted in relation to this Project shall be based on the Vendor having familiarized itself with all detailed requirements and other conditions, variables and risks, which may in any way affect the nature and/or cost of the proposal that it submits.

Any data or other information as provided by the Company is given without guarantee, is subject to the Vendor conducting its own investigations, and enquires.

Provided Information / Documentation

- 1.1.1.All provided information / documentation is to assist the Vendor in preparing its proposal for this Request for Proposal (RFP) and Scope of Works (SOW). Any information disclosed to Vendor must be treated as strictly confidential and used only for the purpose of preparing a submission for this RFP.
- 1.1.2. Scope of Works provides an outline of the estimated training requirements.

2. GENERAL SPECIFICATION

The Project detailed in this RFP and SOW shall be developed and completed in line with the timeframe agreed between the Company and the Successful Vendor.

Should there be any conflict between the capabilities of a proposed software solution and this Scope of Works; the Successful Vendor shall obtain written clarification from the Company prior to proceeding with the works that are in question.

All substitutions against the approved Proposal shall meet or exceed the minimal functional and technical specifications and will require approval from eltizam.

2.1 Quality Standards

- 2.1.1 The delivery of this Project shall be the sole responsibility of a single specialist Vendor with appropriate expertise and experience in the implementation of software solutions consistent with the requirements of this RFP and SOW. The Vendor shall have in-house personnel with capabilities in development, implementation, training and support. The Vendor shall provide a qualified team immediately managed by a project manager who is dedicated to the project during the project period.
- 2.1.2 By submitting the proposal, the Vendor thereby certifies that it is qualified in all areas pertaining to the SOW, either directly or indirectly.
- 2.1.3 The Vendor shall ensure compliance with, and a thorough understanding of, all aspects of the software solution.

2.2 Use of Sub Contractors

- 2.2.1 The Vendor shall be directly and solely responsible for ensuring the qualifications, licensing, insurances, compliance, and quality and timeliness of all works carried out by any of its subcontractors. The Vendor shall take full responsibility for all damages, failures and unsatisfactory work outcomes, and any other expense incurred and caused by any subcontractor under the Vendor's control and management.
- 2.2.2 The Vendor shall be entirely responsible to ensure that any sub-contractor under its control is adequately covered by insurances such as (but not limited to) third party liability, workman's compensation and professional indemnity and will need to provide proof of such insurance at the request of the Company.
- 2.2.3 The Vendor shall ensure that any sub-contractor under its control is appropriately qualified and licensed to perform the works and shall provide proof of such qualifications and licensing at the request of the Company.

2.3 Indicative Program of Works

- 2.3.1 The Vendor's submission will include an indicative program of works.
- 2.3.2 The Program of Works (POW) will indicate the following:
 - Project planning & scheduling
 - Business process flows, BRD & FRD

- Project mobilisation
- Software development (Web)
- Workflow implementation
- Training
- Reports development
- Support
- Go Live
- After support

2.4 Technical Information

The Company will, wherever possible, adapt its business processes to maximise the suitable software solution developed by the Vendor. Where the business processes cannot be adapted due to critical business activities, the Vendor will work with the Company to customise a suitable workaround of the developed solution; this will include providing the Company with a workflow and demonstration of the customisation.

2.5 Hardware / Network Specification

- 2.5.1 The Vendor will submit a detailed specification of the hardware required to run the proposed Real Estate Valuations Management System Software Application (Web).
- 2.5.2 The Vendor will submit details of the ideal configuration required to provide the optimum performance from the Real Estate Valuations Management System Software Application (Web).
- 2.5.3 The Vendor will submit details of the network connectivity required for the office-based users to have access to the Real Estate Valuations Management System Software Application (Web) in an efficient manner.
- 2.5.4 The Vendor will submit details of the Web based access requirement for users who enter and view data.

2.6 Reports and Documents

The Company will provide the Vendor with sample report layouts and document templates to be created in the software solution. The Vendor will ensure all reports can be created based on; to and from dates, Projects, buildings, KPIs, performance, business streams, and any other activity variable. The Vendor will ensure that the document template, where applicable, are suitable for document automation.

Examples of Reports required: (Project specific):

- a. Executive Summary
- b. Valuation Report

- c. Introduction
- d. Professional Valuation Standards
- e. Identification and Status of Valuer
- f. Purpose of Valuation
- g. Identification of Client & Limitation of Liability
- h. Basis of Value
- i. Valuation Date
- j. Inspection and Extent of Investigation
- k. Nature and Source of Information Relied Upon
- I. Assumptions and Special Assumptions
- m. Floor Area and Plan
- n. Environmental Matters
- o. Plants and Equipment
- p. Location
- q. Valuation
- r. Restriction on Use, Distribution or Publication
- s. Valuation Uncertainty
- t. Opinion of Value

2.7 Training

- 2.7.1 The Vendor will propose a training schedule for the Company's key users. The training program will be in a modular format to accommodation the super users, who will require training on the entire software solution.
- 2.7.2 The Vendor need to provide a training schedule for end users who will enter data inside the system and generate reports accordingly along with upload documents.
- 2.7.2 The Vendor will provide a daily training rate for any additional training identified after the issuing of the project handover certificate.

2.8 Licenses

- 2.8.1 The Vendor will provide the Company with full details of any licensing requirements, whether it is proprietary (licenses required to buy for development), free and open source or anything else.
- 2.8.2 The Vendor will provide the Company with details of the different levels of licenses if applicable.
- 2.8.3 The Vendor will provide the Company with details of any license which is not transferable, for example when an employee leaves the Company, the license cannot be transferred to the new employee, and any license which needs to be renewed on an annual basis.

2.9 Project Coordination

- 2.9.1 The Vendor will coordinate and liaise with the Company's appointed Project Manager.
- 2.9.2 Coordination of the Project will include (but not be limited to) the following:

- Liaise with the Company's General Manager, Technology Manager and Finance representatives, to develop work flows and create reports and document, together with any other areas of work as they are identified
- Liaise with the Company's Technology Manager to ensure the required hardware, networking and internet accessibility is available, together with any other areas of work as they are identified.
- Liaise with the Project team to ensure the project timeframes remain on course and any delays are identified immediately.

3. DETAILS OF THE WORKS

In order for Vendors to submit comparable RFP's, the requirements for each business element has been outlined in Scope of Work Document.

The Real Estate Valuations Management System Software Application (Web) will be implemented in phases.

The development will be implemented in three phases as per Modules:

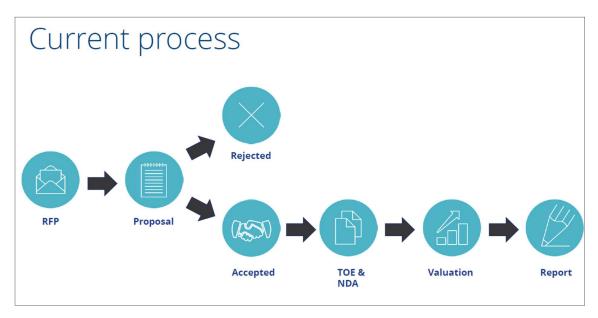
- Valuation & Evaluation Process
- Broker Management Process
- Dashboards / Reports:
 - Management
 - Analyst
 - Client
 - Proposal status
 - Revenue generation
 - Projects performance

In order for endorse to submit comparable RFP's, the requirements for each business element has been outlined in Scope of Work.

3.1 Scope of Work

This section contains scope of work to provide to develop the requested modules and establishes dashboards for prodigious output.

Envisages outsourcing team, will be responsible for establishing, developing & providing support to end-to-end services.





Current valuation Process includes:

- **RFP's:** Receive valuation request from external parties.it includes Property details, valuation purpose & client information
- **Proposal**: Relevant proposal is created along with relevant documentation in which fees structure, scope of works is included.
- Acceptance/Rejection: The request can be approved or rejected on basis of process criteria's
- **TOE (Terms of Engagement / contractual document) & NDA:** If request is accepted then team follows as per criteria do inspection of property and create assets list with all relevant documentation on basis of terms and conditions.
- Valuation: In this step the valuation of property takes place

Report: It describes all detail level information along with status of property and relevant documentation.

Set up requirements include

- Configuration locations centralized: One (1)
- Delivery model: On Premise (with on Cloud facility)
- Web Admin Application
- Web Client Portal
- Number of core users Web (end users /Management)
- The Software Application will have an automatic notification (email/in-app/SMS) functionality. The email/in-app/SMS functionality required at each stage of the process will be designed, developed and inbuilt within the application by the successful Vendor.
- The Company has provided details of its document / report requirements (samples). The Successful Vendor will be responsible for customizing the documents / reports as outlined to meet the requirements of the Company's.
- The Successful Vendor will install and configure software solution enabling data entry at remote locations.
- The Successful Vendor will be responsible for any data migration if applicable and mutually agreed at the beginning of the project.
- The Successful Vendor will be responsible for providing users at all levels with adequate training as outlined in training section. The training program will be designed by the Successful Vendor and where appropriate will include a train the trainer approach.
- The Successful Vendor will be required to provide a minimum of ninety (90) days support following the issuing of the Handover Certificate.
- The Successful Vendor will be required to provide a minimum one year's support contract once system goes live with contractual agreement.
- The Vendor should provide the IP rights of the software developed for EAM as part this scope.
- The Vendor should provide the weekly updates on the development progress and handover the source code once completed.
- The Vendor is required to provide a separate cost for the annual license renewal fees (if any) and Annual Maintenance Contract.

- The Successful Vendor must submit a Project schedule, outlining each Project activity and the estimated time allotment prior to commencing the Project. The Project schedule will further identify which members of the Company's Project team are required during each Project activity.
- The Successful Vendor will liaise with the Company's project manager during the duration of the Project to monitor the Projects progress, approve deliverables, approve and issue change requests, allocate Company resource and agree milestones
- The Project handover will be attended by a representative of the Successful Vendor and the Company. The handover will be formally documented and any remediation works will be concluded within an agreed period. On completion of the remediation works, the Successful Vendor will issue a completion certificate to be signed by the Company.

4. **REQUIREMENTS**

The following Professional Services requirements have been outlined, an evaluation will be carried out and a detailed estimation would be submitted.

- Valuation process
- Broker management process

ITEM	DESCRIPTION
Valuation Process	The scope of services that need to be provided by the Vendor, which can be broadly classified into the following areas:
	Design & Provide UI/UX for the entire application
	VALUATION PROCESS:
	Build Valuation process as per Location
	2. Build Valuation Process with approval workflow
	3. Evaluation Process with documentation attached
	FINANCIAL MANAGEMENT 1. Payment - Currency - Valuation Fees (AED) - (XXX) - VAT - TAX (AED) - XXX - Other charges - XXX (If Any) - Valuation Instructor charges - TOTAL FEES (Sum of all fees) - Valuation Fees + TAX + VAT + Other Charges = TOTAL FEES 2. Payment mode receive (Cheque, Cash, CC, Net Banking, etc.) 3. Invoice, Receipt (payment) 4. Revenue
	MASTER TABLES
	1. Location

 Client External vendors Projects Valuation Approver External valuation approver History of existing data Currency Approval master
 4. Projects 5. Valuation Approver 6. External valuation approver 7. History of existing data 8. Currency
5. Valuation Approver6. External valuation approver7. History of existing data8. Currency
5. Valuation Approver6. External valuation approver7. History of existing data8. Currency
6. External valuation approver7. History of existing data8. Currency
7. History of existing data8. Currency
8. Currency
3. Approval master
DASHBOARDS & REPORTS
1. Management
2. Analyst
3. Clients
4. Proposal status
5. Revenue generation
6. Projects performance
Broker Management Process The scope of services that need to be provided by the Vendor,
which can be broadly classified into the following areas:
Design & Provide UI/UX for the entire application
BROKER MANAGEMENT
Broker Registration Applications
2. Non- Exclusive Brokerage Agreement & External Broker
Application
3. Approval workflow
4. Relevant document upload
4. Relevant about the appoint
ANNUAL ASSESSSEMENT of BROKER
Broker Registration Applications
2. Annual External broker assessment form.
3. Annual Assessment
4. Relevant document upload
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FINANCIAL MANAGEMENT
1. Payment
- Currency
- Valuation Fees (AED) - (XXX)
- VAT
- TAX (AED) - XXX
- Other charges - XXX (If Any)
- Valuation Instructor charges
- TOTAL FEES (Sum of all fees)
 Valuation Fees + TAX + VAT+ Other Charges = TOTAL FEES
2. Payment mode receive (Cheque, Cash, CC, Net Banking, etc.)
3. Invoice, Receipt (payment)
4. Revenue
MASTER TABLES

	 Location Client External Brokers details Projects Valuation Approver External valuation approver History of existing data Currency Approval master DASHBOARDS & REPORTS Management Analyst Clients/Broker 	
Project Management	Project Planning and Implementation Control	
Security	The system must control user access via an authentication mechanism based on a unique username and password login for each user. The system should store the user passwords in the database using irreversible encryption methods. The system must allow an unlimited number of "potential" users with detailed access levels. The system must ensure that all authentication data and the mechanism itself is protected against unauthorized access.	
Control Access	The system should allow for each user to be assigned to a user group; for example, by job function or departmental structure/hierarchy. The system should allow the definition of different levels of access control for each user group to allow for segregation of duties and delegated financial authority levels; for example, supplier creation, supplier modification, invoice entry and invoice authorization.	
Core setup	Entire setup of real estate valuation management system which includes creating Master databases for Clients, Developers, Properties and Architects details as per location, diagrams layout, floor plan, controlling user roles as per security, managing approval workflow, financial management.	
Data Load	Entire setup of real estate valuation management system should be compatible to merge with our Application (if require) & reusable for data analysis purposes. Complete Reporting structure should be available.	
Reporting	Refer section Reports and Documents (2.10)	
Accessibility & Notifications	System should be compatible to send notifications and reminders to client & keep chain of feedback or reply form client and update	

	the history of client, internal email circulation which will be connected through Outlook of individual.	
Training	Refer section training (2.11)	
Language	Support in English & Arabic language	
Future Vision	Fixed slab range should be provided by vendor for futuristic additional projects, resource & services related estimation.	

4.1 Detailed scope of Works

a. Valuation & Evaluation Process Scope definition:

Below information indicates detail scope of requirements of the phases:

Functionality	Sub- Functionality	Detail Steps	Process of Fields
Valuation Request	Valuation Request from external parties	Create screen with "Valuation "name and it should include fields as required	The main valuation screen contains the following fields: - Date - Valuation reference No -(System generated no) - Other Number (manual entry for reference) - Location (Dubai, Abu Dhabi) - (selection from filters/dropdown) - Area filters (If applicable) - Entity Name (Bank, Individual, Entity, etc) - (selection from filters/dropdown) - Applicant Name (If individual) - (Manual Entry) - Property Address 1,adress 2,address3,city,country -(auto populate) - Use Type (Commercial, Residential) - (selection from filters/dropdown) - Use Subtype (Office/Retail/Industry/Land) etc - (selection from filters/dropdown) - Property Type (Freehold, Leasehold) - (selection from filters/dropdown) - Valuation Purpose (Drop Down) - Method of Valuation (selection from filters/dropdown) - Status of Valuer (selection from filters/dropdown) - Property Interest (Tenure) - Valuation Date (as agreed) - VALUATION STATUS: (New, Accepted, Cancelled, Rejected, Quotation Submitted, Approved, Under-Valuation, Completed). Status Sequence: NEW - Request Raised Accepted - 1st level of approver Quotation Submitted - send details to client/entity Approved - final level of approver Rejected - rejected the request for edition

		Cancelled - cancel the request Under- Valuation - Valuer is validating the records Completed - Request is completed - Valuation Time frame (Start Date & End Date)
Approval Process	Once admin adds the request inside the system - it requires an approval	Need to create hierarchy approval process - for valuation Creator - who creates the Request Approver - Based on the values Multi level Approvals are required
Quotation Request	ability to create/add/Edit Cost of valuation price to send to requestor by business admin	The Details of Payment Section: (ability to select the price form dropdown (as master data stores fixed entity fees as per client AND option should be available to add numbers (if any discounts or for new client) - Currency - Valuation Fees (AED) - (XXX) - VAT - TAX (AED) - XXX - Other charges - XXX (If Any) - Valuation Instructor charges - TOTAL FEES (Sum of all fees) Ability to add multiple quotes there could be situation without the proposal also.
Payment	ability to create/add Cost of valuation price to send to requestor to create INVOICE	The Details of Payment Section: (ability to select the price form dropdown (as master data stores fixed entity fees as per client AND option should be available to add numbers (if any discounts or for new client) - Currency - Valuation Fees (AED) - (XXX) - VAT - TAX (AED) - XXX - Other charges - XXX (If Any) - Valuation Instructor charges - TOTAL FEES (Sum of all fees)

	Invoice, Receipt (payment)	this screen will share Invoice printing process & receipt of payment received Ability to accept the payment and add/edit inside the payment screen to release the receipt	this screen will complete Invoice printing process & receipt of payment made will release to proposer Admin should be able to accept payments made by client and then able to generate the receipt on basis of payment - Chq - Cash - CC - Net banking etc.
	Terms of Engagement	Ability to send the terms of engagement through EMAIL facility with quotation	Once approval received terms of engagement will be released to client along with quotation
Evaluation Process	Valuation Instructor screen	This screen will show once approval is completed and status should show as "Under valuation"	1.Valuer Name 2.Qualification 3.Position 4.AD Municipality Number (If Applicable) Under Supervision: 1. Valuer Name 2.Qualification 3. Position
	Site Description screen	Ability to add /edit/delete/modify site related information with brief description to keep options to add This screen will show once approval is completed and status should show as "Under valuation"	Site Description: Developer Information External Description: 1. Structural Information 2. External Information Condition: Notes (to add manually) Additional Information: Notes (to add manually) Others: Notes to add manually Relevant Documents ability to add locations for inspections (internal & external areas, floor, room, bedrooms, storage, quantity, images, comments etc.) while carrying out the inspection.
	Comparable Evidences	Ability to add /edit/delete/modify comparable evidences along with upload any relevant documents	Address, Type, Size, remarks, Price, Rate(sq.ft), comments
	Valuation Assessment	Ability to add /edit/delete/modify Valuation	Market Value Life of Building Market Ren

	Assessment along with upload any relevant documents	Annual Maintenance Cost Insurance
Relevant Document	Upload documents	Upload documents
Release Valuation Report	Once valuation is completed then this report will send to proposer	Once valuation is completed then this report will send to proposer

Above we need to add internal approval workflow of valuation once completed by the valuer. If I recall correctly, it can be sent back for editing if not approved, prior to re-submitting for approval.

Also, there needs to be workflow approval at both proposal and TOE stages (2), as confirmed by Colliers KSA call.

b. Broker Process Scope definition:

Below information indicates detail scope of requirements of the phases:

Functionality	Sub- Functionality	Detail Steps	Process of Fields
Broker Registration Applications	Non- Exclusive Brokerage Agreement	Ability to add/modify/delete the details in the related agreement form	Date:DDMMYYYY Broker Name (Drop Down) Broker Type (Non-Exclusive, External, Internal, Exclusive) - (Drop Down) Address1,address 2,address3,City,Country (Name ,Address Box, TRN, Commercial license details, TAX registration Number, Expiry date, Contact No) - all (Drop Down) Agreement date:DDMMYYYY Effective Date:DDMMYYYY Term: 1 year,2 year (Drop Down) Broker Amount: (manually enter) Broker % (Commission)(manually enter)

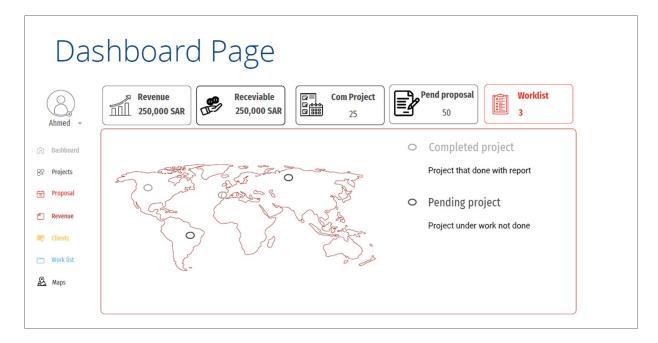
External Broker Application	Broker should be able to add/modify/enter manual details in this form	Date :DDMMYYYY Company Name: (Drop down from master details data to be pulled) Owners representative name :(Drop down from master details data to be pulled) Owners/Brokers ID:(Drop down from master details data to be pulled) Questions: 1.Years of experience in Real Estate Brokerage in the Emirate of Abu Dhabi? Check box for below options to check one option : (less than a year,1-3 years,3 years & above 2.List Three of any Major Landlords that you are listed with in the Emirate of Abu Dhabi Landlord 1: Manual input option Landlord 2: Manual input option Landlord 4: Manual input option 3.Any Existing agreements with any of the Property Portals? Check box for below options to check one option : 0 YES 0 NO - if yes, please provide information below. 1:Manual input option 2:Manual input option 3:Manual input option 4.How many agents are employed by your company? Check box for below options to check one option : 1-5 Agents 6-10 Agents 11 Agents
	documents available for reference and verification?	Check box for below options to check one option: 0 YES 0 NO - 1.Company Profile 2.Capability Statement 3.Valid Copy of Real Estate Company's Registration/Certificate with Abu Dhabi Municipality (ADM) 4.Valid copy Abu Dhabi Commercial Trade License 5.Valid copy of the Power of attorney in case the Company representative is not mentioned in the Trade License

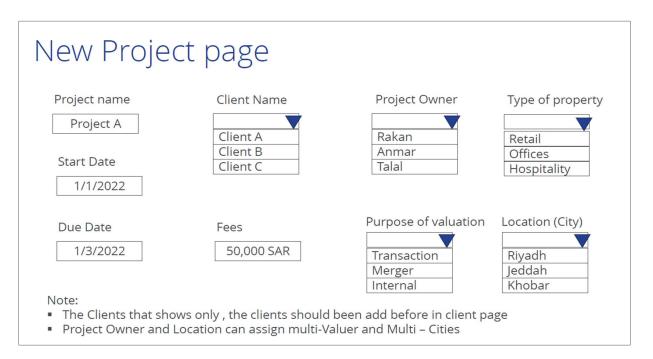
			6.Valid copy of Owner's Passport, Residency and Emirates ID (front & back) 7.Copy of the Signatory's valid Passport, Residency and Emirates ID (front & back) 8.Valid copy of Tax Registration Certificate
	Approval Process	Once admin add the request inside the system - it requires to review by reviewer and then approval need to approve it	Need to create hierarchy approval process to get reviewed and approved by management for each broker agreement: Creator - who creates the Request Approver - Based on the values Multi level Approvals are required
	Relevant Document	Upload documents	 Agent's Broker's ID Real Estate Company's Registration with Abu Dhabi Municipality (ADM) Company's Abu Dhabi Commercial Trade License (Valid) Owner's Passport, Visa and Emirates ID (front & back) Power of attorney in case the Manager name is not mentioned in the Trade License Signatory's Passport, Visa and Emirates ID (front & back) Tax Registration Certificate Company Profile or Capability Statement
Annual Assessment	Annual External broker assessment form	Ability to conduct annual assessment of each registered broker, and view related score.	1. 0 – 5 Deals 5 – 10 Deals 11 – 20 Deals 21 Deals and above Points 10 20 30 40 Number of Deals Closed Manual input option (enter the values manual input) 2. 0 – 250K, 250K – 500K, 501 – 750K,751K – 1M Points 10 20 30 40 Value of Deals Closed (enter the values manual input) 3. 10 Above 7 – 9 4 – 6 3 or Less Points 10 20 30 40 Number of Documented Complaints XXX (enter the values manual input) 4. 0 – 5 6 – 10 11 – 20 21 and above Points 10 20 30 40 Value of Deals Closed (enter the values

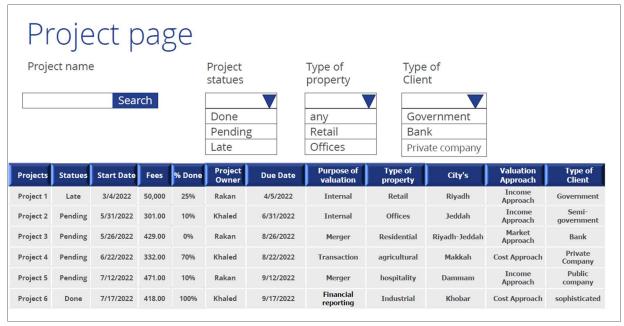
		manual input)
		Action Required Option Check box for below options to check one option: 0 YES 0 NO - Renew Contract Non-Renewal or Terminate Contract
Approval Process	Assessment output approval process	Once the assessment is completed in the system - it requires an approval

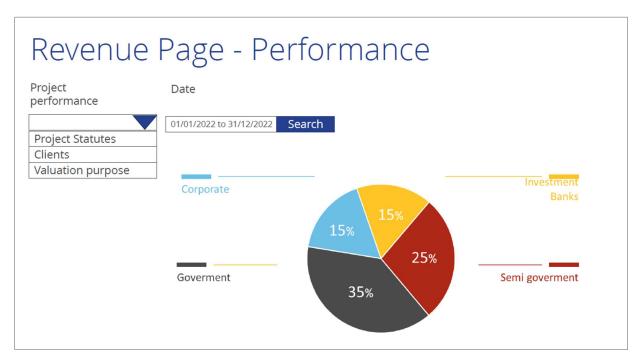
5. EXPECTED DASHBOARD SAMPLE:

Below pictures are the reference points to show the scope in detail as prototype:

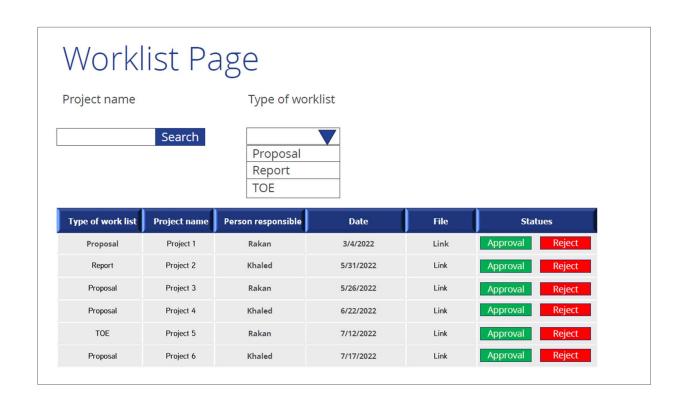






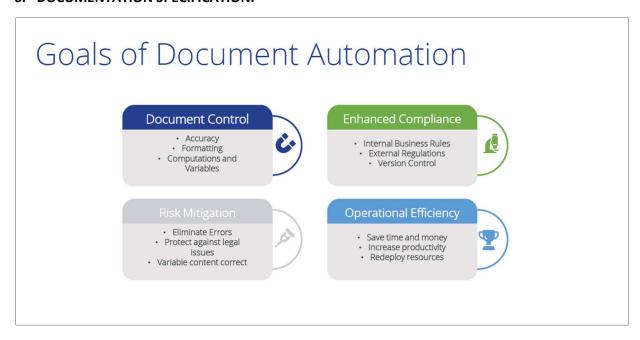


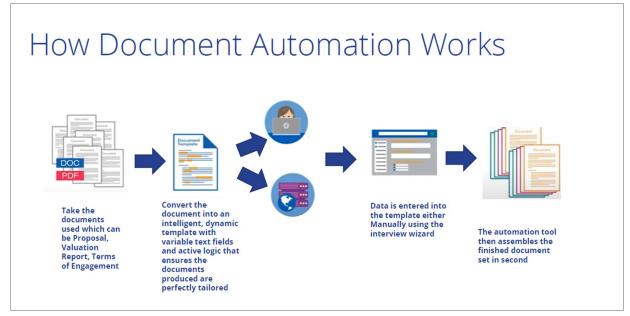






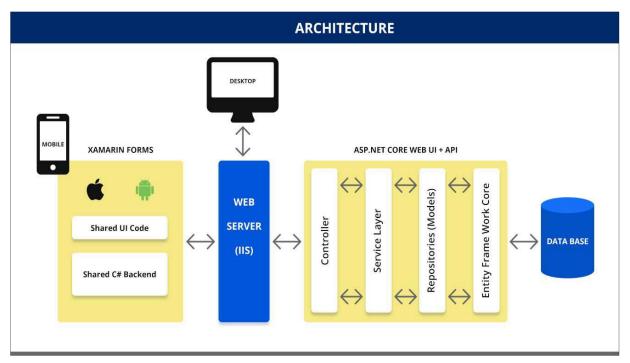
6. DOCUMENTATION SPECIFICATION:





7. TECHNOLOGY SPECIFICATION

The successful Vendor should propose the tools and its related licenses would be used to develop or buy off the shelf of real estate valuation management system and handover them at the end of the project. Vendors to use Microsoft technology in performing any development.



A brief description of the architectural components is given below:

- **Consumers:** These are the User interface devices which uses API's to display data/information to the end-user browser/mobile App
- **Hosting Layer:** Which consists of a host and a server. The host is responsible for application start-up and lifetime management.
- **Web Server** The server is responsible for accepting HTTP requests. The server handles incoming and outgoing Http requests.
- **Asp.net core**: A unified architecture, which is used to build web UI and API's. A lightweight, high performance, and modular HTTP request pipeline. Ability to host on IIS, Nginx, Apache, Docker, or self-host in your own process.

• Controllers: Base controller (Controller + API Controller). A controller is used to define and group a set

of actions. An action (or action method) is a method on a controller which handles Http requests.

• Service Layer: is an additional layer in an ASP.NET CORE MVC application that mediates

communication between a controller and repository layer. The service layer contains business logic.

Repository layer: In application that mediates between the service layer and entity framework core

entities. (Models)

Entity framework core: EF Core can serve as an object-relational mapper (O/RM), enabling .NET

developers to work with a database using .NET objects, and eliminating the need for most of the data

access code they usually need to write.

Data sources: data source is the primary location from where data comes. SQL is used to query, insert,

update and modify data.

a. Implementation Technologies

This Web & Desktop application will implement logical services by using the following technologies:

• Microsoft .NET core

• C# Coding Language

SQL Server 2017

• Windows Server.

Entity Framework and SQL Server

• SVN / GIT will be used for version controlling

C#.NET

C#.NET is used to implement the business logic of the application. Code behind will be used for

implementing business logic.

Entity Framework and SQL Database server

Entity Framework provides data access services and will be used to establish the connection to SQL Server

and store information.

Xamarin for Mobile Development

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Xamarin is a C# framework that offers its own wrappers for all the native platform APIs (including Apple Watch, tvOS, Android Wear, etc.). C# is a compiled language and generates builds close to the native app.

7.1 Interfaces

- Real estate valuation management system should be open for the API integration with any kind of ERP or other applications.
- Any other identified at the time of implementation will be mutually agreed and signed off separately.

All the above interface processes/schedules will be prior agreed by the EAM and the nominated Vendor.

~end~